

CREB: Key Participants



Wesley Henderson



Kyle Grew



Marshall Schroeder



Jim Short



Chunsheng Wang



Eric Wachsman

Dr. Wesley Henderson – ARL Lead, CREB

Dr. Kyle Grew – Chief, ARL Battery Science Branch

Dr. Marshall Schroeder – ARL Battery Science Branch



Dr. Jim Short – Program Administrator & Principal Investigator (PI), CREB

Prof. Chunsheng Wang – Director, CREB

Prof. Eric Wachsman – Director, Maryland Energy Innovation Institute



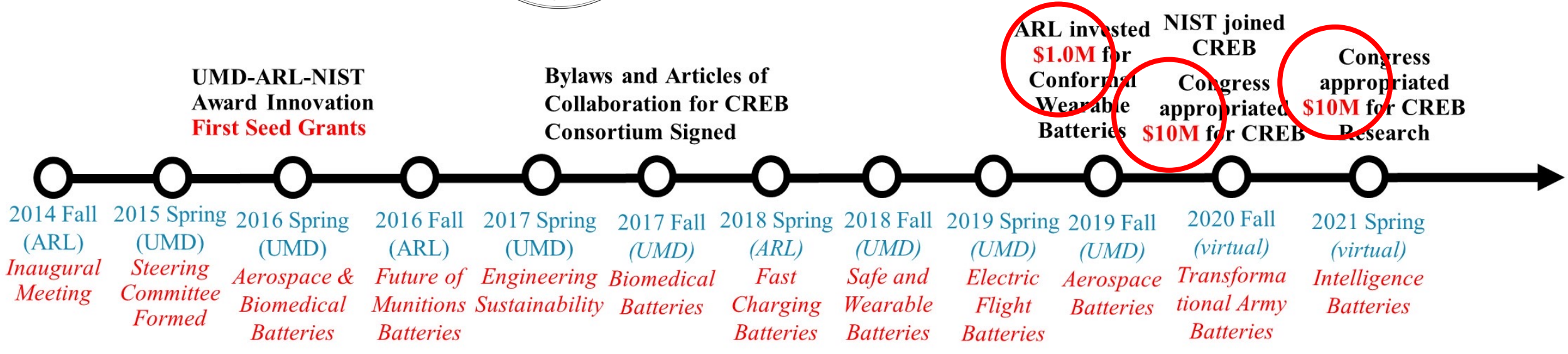
www.creb.umd.edu



MARYLAND ENERGY INNOVATION INSTITUTE

www.energy.umd.edu

The Birth of CREB: Center for Research in Extreme Batteries



bi-annual CREB meeting topics



CREB Organization

CREB Steering Committee

Univ Maryland: Chunsheng Wang (UMD CREB Director) & Eric Wachsman

ARL: Wesley Henderson (ARL CREB Lead) & Kang Xu

ANL: Kahlil Amine

BNL/Stony Brook Univ: Esther Takeuchi

NIST: Joseph Dura & David Jacobson

NY-BEST: William Acker

Binghamton Univ: **Stanley Whittingham** (Nobel Laureate in Chemistry, 2019)



Wesley Henderson



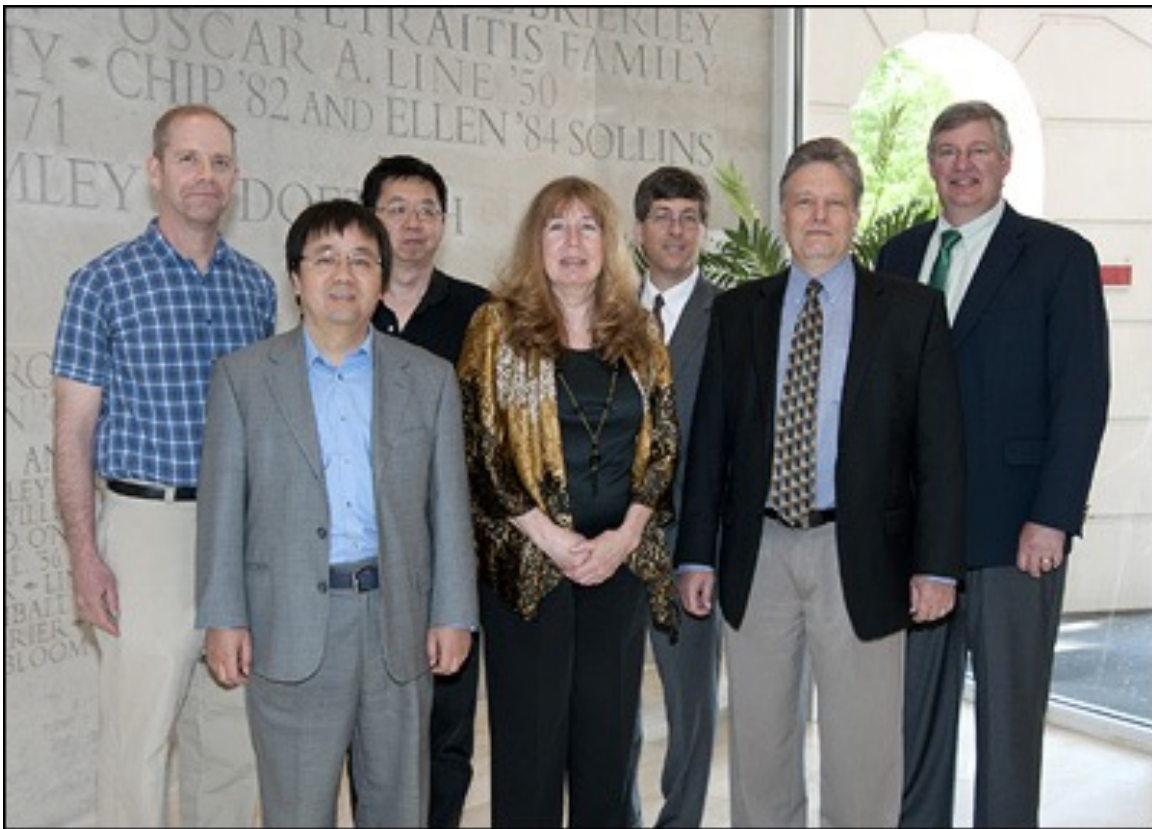
Kahlil Amine



Esther Takeuchi



Stanley Whittingham



Jim Short

CREB Program Administrator
Former Senior Technical Advisor to the Assistant Secretary of Defense for Operational Energy
SES Director of DoD Laboratory Programs, OSD
Weapons Staff Specialist for DDR&E
Scientific Officer at ONR



CREB Bi-Annual Meetings

Spring & Fall meetings held each year

Meetings fostering interchange among battery manufacturers, industrial innovators, government acquisition, government laboratory & academic leaders

	Themed Bi-Annual Meetings	No
2022 Spring	Science & Technology Enablers of a Domestic Extreme Battery Supply Chain	125
2021 Fall	Extremely Low Temperature Environments	160
2021 Spring	Extreme Batteries for Intelligence Community Needs	125
2020 Fall	Getting Commercial-Off-The-Shelf (COTS) Cells into DoD Batteries	125
2019 Fall	Space Batteries	90
2019 Spring	Electric Flight Batteries	~75
2018 Fall	Wearable Batteries for Soldiers	60
2018 Spring	Soldier Lethality, Next Generation Combat Vehicle, Future Vertical Lift Batteries	~75
2017	Biomedical Batteries	~75
2016	Munition Batteries	~100



CREB Bi-Annual Meetings

2022 Spring

Science & Technology Enablers of a Domestic Extreme Battery Supply Chain

C4V Charging Ahead!
SAFT a company of **TOTAL**
ion Storage Systems
GDI graphenix development inc. ENABLING FAST ENERGY.
umicore Rechargeable Battery Materials
Pacific Northwest NATIONAL LABORATORY
ECS The Electrochemical Society Advancing solid state & electrochemical science & technology
DEVCOM ARMY RESEARCH LABORATORY
OFFICE OF THE UNDER SECRETARY OF DEFENSE ACQUISITION AND SUSTAINMENT
UNIVERSITY OF MARYLAND
UNITED STATES INTERNATIONAL TRADE COMMISSION
CREB CENTER FOR RESEARCH IN EXTREME BATTERIES

2021 Fall

Extremely Low Temperature Environments

EAGLEPICHER TECHNOLOGIES
SOUTH 8 TECHNOLOGIES
UNIVERSITY OF MARYLAND
UAF UNIVERSITY OF ALASKA FAIRBANKS
TEXAS The University of Texas at Austin
APL JOHN HOPKINS APPLIED PHYSICS LABORATORY
PURDUE UNIVERSITY
DEVCOM ARMY RESEARCH LABORATORY
DEVCOM ARMAMENTS CENTER
NASA Jet Propulsion Laboratory California Institute of Technology
DEVCOM CSISR CENTER
CRREL COLD REGIONS RESEARCH AND ENGINEERING LABORATORY **ERDC**

CREB Bi-Annual Meetings

2021 Spring

Extreme Batteries for Intelligence Community Needs



2020 Fall

Commercializing Battery R&D & Getting Commercial-Off-The-Shelf (COTS) Cells into DoD Batteries

